



# ***The Resonator***

**Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club**

**Volume 4, Number 8**

**www.FairLawnARC.org**

**August 2019**

## **From The President:**

To FLARC members:

I know everyone is busy this time of the year and so is the club. August 8th from 7-8PM we have MESH networking online training, August 10th FCC license testing 9-11AM at the Rec Center, and Vintage equipment night August 16th from 7-9PM at the Senior Center. The NA QSO Party SSB is 1800 UTC August 17 to 0600 UTC August 18.

We will be working this month on the process of purchasing and replacing the "adjustment" mother nature made to our club repeater antenna. We are lucky that the members of the technical committee such as Paul W2IP and other members involved with the original and 2018 antenna projects used proper techniques & practices so that no other equipment was damaged from the lightning strike. Be on the lookout for a work party!

Reminder: We are a large group of people now who all have different interests and opinions. Keep discussions during any FLARC event at the Rec Center, Senior Center, or offsite events on topic and remember we are all representatives of the club to anyone outside of it. Just like on the air please refrain from topics such as politics, religion, business (do not advertise for your own business if not Ham Radio related), or derogatory remarks. The ARRL supports the following site that I am linking you to which you will find useful for Ham Radio Ethics and Operating Procedures:

<http://bit.ly/Op-Ethics>

As promised I will start running more of the cable building and soldering classes starting likely towards the end of the summer. Be on the lookout for emails with the dates. If you have other topics you'd like to see covered by myself, another member you know, or yourself contact the council so we can work on setting that up!

Brad - KM2C  
FLARC President

## **Member Profile**

NAME: **Judith Shaw** CALL: **KC2LTM**

*"I am the softer side of ham radio and FLARC..."*

### **What do you do/what did you do for a living?**

I'm in the field of Administration/Customer Service/Sales Support. These are actually a wide area of responsibility for a company. You need to know the current and future plans for the growth of a company. Being an Administrative Assistant, I have the ability for my thoughts and ideas to be heard and acted upon in good faith. Customer Service is just "caring for people." You get the good, bad and the ugly. I'm sure everyone understands this because we all become a customer service representative advising each other of experiences we had in our own lives. Sales Support -- well, you get to meet new people and find out how the sales numbers really work.

### **How did you get interested in ham radio?**

Once upon a time in the land of old HTs and strange looking antennas I knew a radio operator -- now a silent key -- who always mentioned about being net control of a weekly net and meeting on Friday nights for amateur ham radio. Of course this was a strange world to me. I would listen from his mobile radio in his vehicle. WOW -- talking to people without a regular phone. After listening for a few weeks to the members and other radio operators around the country using a special call sign, I started to meet members of the club and became involved in events that were held.

I knew what a short wave radio was because I heard stories that my grandfather had one and communicated to his family and friends in England during the 1930s, 1940s and into the 1950s.

This was so new to me I studied very hard and finally received my technician license in 2003. Yes, I know - now I have a General class license book from Hamvention personally signed by Gordon West which is a good inspiration to upgrade my license to General.

**Continued on page 4.**

**The Club** Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

## Fair Lawn RACES/ARES Corner



### 2018 Officers, Committees and Assignments

|                           |                                 |               |
|---------------------------|---------------------------------|---------------|
| <b>President</b>          | <b>Brad Kerber</b>              | <b>KM2C</b>   |
| <b>Vice President</b>     | <b>Lowell Van't Slot</b>        | <b>W2DLT</b>  |
| <b>Treasurer</b>          | <b>Al Rasmussen</b>             | <b>WA2OWL</b> |
| <b>Secretary</b>          | <b>Randy Smith</b>              | <b>WU2S</b>   |
| <b>Trustee</b>            | <b>Skip Barker</b>              | <b>KD2BRV</b> |
| <b>Trustee</b>            | <b>Don Cassarini</b>            | <b>N2PRT</b>  |
| <b>Field Day</b>          | <b>Steve Wraga</b>              | <b>WA2BYX</b> |
| <b>Member Services</b>    | <b>Judith Shaw</b>              | <b>KC2LTM</b> |
| <b>Publicity</b>          | <b>Ed Efchak</b>                | <b>WX2R</b>   |
| <b>Publicity</b>          | <b>Gene Ottenheimer</b>         | <b>WO2W</b>   |
| <b>Publicity</b>          | <b>Susan Frank</b>              | <b>W6SKT</b>  |
| <b>Program</b>            | <b>Lowell Vant Slot</b>         | <b>W2DLT</b>  |
| <b>Publicity</b>          | <b>Karl Frank</b>               | <b>W2KBF</b>  |
| <b>Publicity</b>          | <b>Brad Kerber (ex officio)</b> | <b>KM2C</b>   |
| <b>Social Media</b>       | <b>Dave Marotti</b>             | <b>NK2Q</b>   |
| <b>Video/YouTube</b>      | <b>Thom Guida</b>               | <b>W2NZ</b>   |
| <b>VE Liaison</b>         | <b>Gene Ottenheimer</b>         | <b>WO2W</b>   |
| <b>VE Liaison</b>         | <b>Pete Senesi</b>              | <b>KD2BMX</b> |
| <b>Education</b>          | <b>Gordon Beattie</b>           | <b>W2TTT</b>  |
| <b>Education</b>          | <b>Randy Smith</b>              | <b>WU2S</b>   |
| <b>Education</b>          | <b>John L. Howard</b>           | <b>K2JLH</b>  |
| <b>Education</b>          | <b>Fred Wawra</b>               | <b>W2ABE</b>  |
| <b>History</b>            | <b>Fred Belghaus</b>            | <b>W2AAB</b>  |
| <b>Health and Welfare</b> | <b>Judith Shaw</b>              | <b>KC2LTM</b> |
| <b>Photographer</b>       | <b>Don Cassarini</b>            | <b>N2PRT</b>  |
| <b>W2NPT Trustee</b>      | <b>Paul Cornett</b>             | <b>W2IP</b>   |
| <b>Technical</b>          | <b>Paul Cornett</b>             | <b>W2IP</b>   |
| <b>Technical</b>          | <b>Randy Smith</b>              | <b>WU2S</b>   |
| <b>Technical</b>          | <b>Fred Wawra</b>               | <b>W2ABE</b>  |
| <b>RACES Director</b>     | <b>Dave Gotlib</b>              | <b>KD2MOB</b> |
| <b>RACES Liaison</b>      | <b>Steve Wraga</b>              | <b>WA2BYX</b> |
| <b>Newsletter Editor</b>  | <b>Ed Efchak</b>                | <b>WX2R</b>   |
| <b>FL Town Liaison</b>    | <b>Gene Ottenheimer</b>         | <b>WO2W</b>   |
| <b>Net Scheduler</b>      | <b>Brian Cirulnick</b>          | <b>KD2KLN</b> |
| <b>Quartermaster</b>      | <b>Brian Cirulnick</b>          | <b>KD2KLN</b> |

FL-ARES is here and FL-ARES is ready for emergency communications when necessary. Of course, this takes training and experience from our membership which currently numbers more than a dozen. We are fortunate to make Fair Lawn and the surrounding communities our home. With our leadership and support from the FLARC we can grow and be of assistance in many community events.

Fireworks night took place on Monday, July 1st. This was the first year FL-ARES volunteered alongside the FLARC for the Fair Lawn Fireworks Night and I would like to thank those members who volunteered.

ARES through the ARRL is undergoing a 21st century makeover - the timing can't be any better. Please see the ARRL-ARES article linked below.

New ARES plan aligns ARES with the needs of Served Agencies:

<http://www.arrl.org/news/new-plan-aligns-ares-with-the-needs-of-served-agencies>

Please sign up for various nets and activities taking place at the following email address:

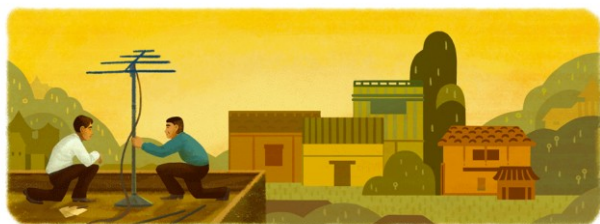
<https://arrl.volunteerhub.com/lp/nnj>

Continued on page 17.

## MASTER EVENT CALENDAR

|                    |   |
|--------------------|---|
| August 16, 2019    | FLARC Vintage Night II (Senior Center)                            |
| August 18-19, 2019 | North American QSO Party SSB                                      |
| September 20, 2019 | Tim Duffy K3LR "An Inside Look At A Superstation" (Senior Center) |
| September 21, 2019 | NJ QSO Party  |
| October 18, 2019   | Howard Michel WB2ITX ARRL CEO "The ARRL Today"                    |
| October 20, 2019   | Fair Lawn Street Fair (River Road)                                |
| November 15, 2019  | George Sabbi KB2GJG "SKYWARN For Today"                           |
| November 29, 2019  | FLARC AUCTION   |
| December 6, 2019   | FLARC Annual Meeting and Holiday Party                            |
| December 13, 2019  | Ria Jairam N2RJ "An Update On The ARRL Hudson Division"**         |
| January 17, 2020   | Florencia Pierri KD2PHZ "The First Mass Audience Radio Broadcast" |
| February 21, 2020  | Ed Efchak WX2R "The 2020 FLARC Member Survey"                     |

\*\* 2nd Friday of month



Hidetsugu Yagi's 130th Birthday Google Doodle

### Follow FLARC ON THE WEB

**Facebook:** <http://facebook.FairLawnARC.org>

**Twitter:** @FairLawnARC

**Blog:** <http://blog.FairLawnARC.org>

**Youtube:** <http://youtube.FairLawnARC.org>

**Website:** <http://FairLawnARC.org>

### FLARC VEC Exams

Our next test sessions are scheduled for **Saturday, August 10th** beginning at 09:00 at the Community Center. No advanced registration is required but always appreciated. The fee is \$15.00 (cash or check).

Please bring positive identification (license, passport, etc.), your original license and a copy, original CSCE and a copy (if credit is needed).

The full exam schedule is on the club calendar at the FairLawnARC.org website. For further information contact [VE-Liason@FairLawnARC.org](mailto:VE-Liason@FairLawnARC.org).

Please refer also to the "License Exams" link on the main website--

<http://testing.FairLawnARC.org>

**We appreciate your support of the Fair Lawn Amateur Radio Club!**

**This is your Club! Be part of it!**

## FLARC DOES SUSSEX

Great to see so many FLARCers in attendance as either buyers or sellers at the Sussex hamfest. While at the ARRL table, the club received a lot of compliments about its growth, activities, and general excitement.

The best club around... yes?

## In A Nutshell

The major events are behind us for now but upcoming is the River Road street fair, the Big Event, the annual Auction the day after Thanksgiving Day and ongoing is the fabulous speaker of the month program lined up by Ed WX2R. Be there - to experience, learn and discover! There is so much going on that there is never a dull moment. Ham radio is a great hobby that spans the spectrum of interests and knowledge. See you at the club.

73, Fred, W2ABE.

## News and Notes

If you can't tell the players without a scorecard... you can. The latest club roster is available at groups.io thanks to AI WA2OWL. Of course, the details are not for publication or for solicitation purposes... it's just for you.

If you have not yet joined our groups.io group, you can visit <http://FairLawnARC.groups.io> and sign up -- or send an email to [webmaster@FairLawnARC.org](mailto:webmaster@FairLawnARC.org) and ask for an invite.

If you're hungry after a Friday session at the club, a number of FLARCers often head out after the club closes for some munchies at various Fair Lawn eateries. Think pizza at Rays. Ham and cheese and ham radio at the Gotham diner. Talk dipoles at the Empress. Every Friday becomes restaurant week.

Give "face time" a new meaning by heading out with the group - as the "Monday net" comes to life in person on Friday evenings.

## Please Note: Operating at W2NPT

Starting in January 2019 club trustees will have sign-in sheets for all operating positions. There is a clipboard at Operating Position #1, #2 (digital) and #4 with a form on which to sign up for half-hour time slots. No longer first come-first served, in fairness to all who want to use our club equipment and the new antennas. More details to follow.

## Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

<http://bit.ly/FLARC-apparel>  
<http://auction.FairLawnARC.org>  
<http://blog.FairLawnARC.org>  
<http://calendar.FairLawnARC.org>  
<http://events.FairLawnARC.org>  
<http://exams.FairLawnARC.org>  
<http://facebook.FairLawnARC.org>  
<http://testing.FairLawnARC.org>  
<http://news.FairLawnARC.org>  
<http://swap.FairLawnARC.org>  
<http://tech.FairLawnARC.org>  
<http://youtube.FairLawnARC.org>

**NEW !**

<https://groups.io/g/FairLawnARC>



## July 2019 Blog Traffic

A better month but still down year over year. Lots of theories but we didn't post this month as well.

|          | July 2019 | July 2018 | Change |
|----------|-----------|-----------|--------|
| Views    | 779       | 872       | -11%   |
| Visitors | 400       | 456       | -12%   |
| Posts    | 2         | 11        | -82%   |

There is new content nearly every day so it's really worth the look to both [FairLawnARC.org](http://FairLawnARC.org) and the blog.

<http://blog.FairLawnARC.org>

## Member Profile (Continued)

### What parts of the hobby most interest you?

**INVOLVEMENT** - I have been involved in events that I thought would not be possible. As a kid (which I still am at heart) sitting curbside watching Memorial Day parades. Now I have led the Fair Lawn Memorial Day parade for many years.

Being a spectator at street fairs and now partaking in a booth introducing amateur ham radio.

Fire Works – WOW – I have never seen fireworks so close up. Watching over the crowd and helping in many ways to assist families in times of joy and excitement.

The auctions are a big deal when all hands are on deck to help. At the end of the day it was the teamwork that mattered the most.

The above is only to name a few things I have participated in.

Now, wanting to learn the new equipment at the club – now that's a good deal, I don't have to travel far either.

### What does belonging to FLARC mean to you? How do you/can you better contribute to the club?

Belonging to the FLARC is very important to me. I feel after all these years of meeting very interesting people and hearing about their backgrounds is worth every minute. It is a different type of "bonding" that happens at our club. I was part of the grand opening of the Rec Center and "showing off" our own radio rooms and that made me feel proud of being a FLARC member. Even today I feel the same way.

A contribution to the club would be to continue to get **to know members by their names, not call signs. It does make a difference when you address someone by their name.** The feeling of knowing they are human beings not just numbers and letters.

Also knowing a little something extra about existing and new members does make people feel a comfort zone and shoulder to lean on.

Continued on page 35.

## Club Apparel -- Get Them While They're **RED!**

Club apparel is always in vogue. Red is always in and your club friends all have them... you *want* a shirt or jacket for the next FLARC event!

Don't forget.... they're easy to order.

Go to [www.hamthreads.com](http://www.hamthreads.com)

or visit <http://bit.ly/FLARC-apparel>

to check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: **RED** is the primary and preferred club standard shirt color.



John K2JLH shows off his spiffy FLARC shirt and hat at Field Day

### 2019 FLARC Speaker Series Locations:

#### **SPEAKERS WHO ARE FLARC MEMBERS:**

**FLARC CLUBHOUSE**

#### **SPEAKERS WHO ARE INVITED GUESTS:**

**FAIR LAWN SENIOR CENTER**



## Balance Of 2019 Speaker Series Announced -- And Into 2020!!

It may be mid-Summer but the FLARC publicity committee is busy lining up a monthly speaker program that now stretches into 2020.

The programs feature Earth-Moon-Earth communication, an introduction to SKYWARN, updates from the ARRL, a look at an historic event in the early history of broadcast radio, a look at a contest superstation, and our annual look at getting some vintage FLARC gear on the air and a look at what you're thinking with the annual member survey.

Check out the events page which includes not only speakers but also activities to get us thinking about Fall, Winter and Spring 2020.

### BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such a gift is worthy.

### About The Club

*The Resonator* is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. **The club is sponsored by the Borough of Fair Lawn.** The club meets every Friday at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL 167.9) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has over one hundred paid members. Dues are currently \$25 per year/\$20 for new members.

For more information, please see our website, at <http://membership.FairLawnARC.org>

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## Upcoming Contests

Always remembering that we are "casual" testers, the club participates in two upcoming events and invites operators both skilled and those desiring to be.

- **August 17-18:** North American QSO Party -- voice for us from 1800Z, Aug 17 to 0559Z, Aug 18th -- lots of fun and
- **September 21:** New Jersey QSO Party -- voice and CW 1600Z, Sep 21 Noon until 11:59 PM -- a chance to meet a lot of old friends who want to stay in touch with NJ.  
**Note: One Day Only in 2019!**

Last year FLARC won the NNJ section of the NJ QSO party and finished second overall -- not bad where the goal is to have fun and improve operating skills. So get involved!!

See Van W2DLT for details.  
No pressure -- lots of fun!!

## Interested in Chasing DX?

A casual group of FLARCers including Van W2DLT, John KD2NRS, Brad KM2C, Karl W2KBF, Nomar NP4H, Steve WI2W, Jim W2JC, Larry WA2ALY and Fred W2AAB have formed an email group to keep each other in touch in (real) time of when the rare or interesting ones show up to chase. Interested? See or contact Van W2DLT.



### FAIR LAWN'S COMMUNICATIONS CENTER! *With New Antennas On The Roof!*



## Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

| Month        | Name           | Call Sign       |
|--------------|----------------|-----------------|
| January 2016 | Pete           | KB2BMX          |
| February     | Marco          | KC2ZMA          |
| March        | Ron            | KC2TBD          |
| April        | Kai            | K2TRW           |
| May          | Larry          | WA2ALY          |
| June         | Dave           | N8MAR           |
| July         | Steve          | WI2W            |
| August       | Thom           | W2NZ            |
| September    | Brian          | KD2KLN          |
| October      | Brad           | KM2C            |
| November     | Al             | WA2OWL          |
| December     | George         | W3EH            |
| January 2017 | Fred           | W2ABE           |
| February     | Dave           | KD2MOB          |
| March        | Randy          | WU2S            |
| April        | Lee            | KD2DRS          |
| May          | Gene           | WO2W            |
| June         | Carol          | KD2NMV          |
| July         | Kevin          | KC2KCC          |
| August       | Robert         | KD2NOG          |
| September    | Robert         | KD2BKD          |
| October      | John           | KD2NRS          |
| November     | Fred           | W2AAB           |
| December     | Margaret       | W2GB            |
| January 2018 | Brian          | KD2OAZ          |
| February     | Bennett        | KO2OK           |
| March        | Van            | W2DLT           |
| April        | Aly            | ALØY            |
| May          | Bruce          | NJ2BK           |
| June         | Dave           | N2AAM           |
| July         | Karl and Susan | W2KBF and W6SKT |
| August       | Steve          | KA2YRA          |
| September    | Paul           | K2PJC           |
| October      | Skip           | KD2BRV          |
| November     | Ed             | WX2R            |
| December     | Tom            | N2AAX           |

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office. Thanks Randy!!!

Back issues are also available on our website.  
<http://newsletters.fairlawnarc.org>

## Theoretics Demystified

Here are two pieces of technology that are very complicated and that are inexorably linked together. As hams we use both all the time but rarely think about what makes them tick and how they are related. To quote someone who recently said that we depend too much on too little. They are the internet and cell phones. As with all major technologies, no one person knows all of how it works but contributes a building block that becomes part of the whole. Major software companies use this approach and then they have a team that brings it all together. This holds true also with computer hardware companies.

There is so much complication that many sub routines are built into the hardware and software systems to correct for flaws and anomalies as they go, this is called parity. But then again you knew that, right? Back in the day and still, there was and is the 16 kilobit error rate. For every 16k bits of data there is an error that needs to be fixed, again parity. As of today the error rate may be much less but that is unimportant for our topic of today. But getting back to our two technologies, the internet was created as a way of sharing knowledge between two research sites and grew from there. It was very primitive and was data and text. There were no visual interfaces (point and click-GUIs) and no text to speech or pictures, let alone video. The internet grew gradually into something that was available on the cathode ray tube screens of the day and gave us mortals a way of communicating with more than just a letter or a phone call.

At the same time the concept of portable phones grew from the three watt big bag phones with only calling capability to the multifunction hand held computers that we know as phones.

Both of these technologies grew up together and became intertwined as the cell sites are linked by internet and radio communications. The cell sites are always talking to the subscribers phone as it needs to know where you are so it can connect calls and now the internet to you. The biggest leap in how we live came when internet capability was added to cell phone operation, thereby spawning the smart phones we now use today. The many companies we do business with and the Emails we get would not be possible without the marriage of the internet (think World Wide Web) and cell phones. Not to say that home phones are not important, but it is hard to carry one around.

*Continued on last page*

## 2019 *Near and Far Net* Check-In's

Now in its third year, the FLARC *Near and Far* net is chugging along each week. Here is list of our check-ins beginning on New Year's Night in no particular order. Mondays at 8PM on the repeater.

| Name     | Call   |
|----------|--------|
| Dave     | N2AAM  |
| Gene     | WO2W   |
| Van      | W2DLT  |
| Karl     | W2KBF  |
| Stan     | KC2K   |
| Ed       | WX2R   |
| Steve    | WA2BYX |
| Brian    | KD2KLN |
| Ken      | W2KAC  |
| John     | K2BIX  |
| Fred     | W2AAB  |
| Bob      | KD2BKD |
| Randy    | WU2S   |
| Dave     | KD2JIP |
| Larry    | KD2QFI |
| Steve    | WI2W   |
| Brad     | KM2C   |
| Thom     | WN2Z   |
| Ron      | KC2TBD |
| Dave     | KD2MOB |
| Bob      | KM4CPU |
| Bob      | KE0OPX |
| Phil     | KA2SEY |
| Dave     | NK2Q   |
| Noel     | N2OEL  |
| Ray      | KD2RBW |
| Larry    | KD2QFI |
| Matt     | K2FTP  |
| Paul     | K2PJC  |
| Tom      | WB2KWD |
| Brian    | KD2OAZ |
| Bob      | N2HIP  |
| Al       | KC2SAV |
| Chris    | W2TU   |
| Anton    | K2PLB  |
| Ray      | KD2RIK |
| Watson   | K3WAT  |
| Kevin    | KD2RJM |
| Roger    | K2RRB  |
| Jonathan | KC2RRK |
| Glenn    | KB2MDR |

## 2019 Member Profiles

With Volume 4, we begin an new list of featured members in a monthly profile. See past profiles elsewhere in *The Resonator* to check back in the archives to see each featured member's background.

| Month        | Name   | Call Sign |
|--------------|--------|-----------|
| January 2019 | Dave   | KD2JIP    |
| February     | Jim    | K2ZO      |
| March        | Zach   | KC2RSS    |
| April        | Bob    | N2SU      |
| May          | Stan   | KC2K      |
| June         | Steve  | WA2BYX    |
| July         | Roger  | K2RRB     |
| August       | Judith | KC2LTM    |

## 2019 *Near and Far Net* Check-Ins (Continued)

| Name    | Call   |
|---------|--------|
| Andrew  | KC2G   |
| Kenneth | KC2OKR |
| Kenny   | W2KAC  |
| Fred    | W2ABE  |
| Judith  | KC2LTM |
| Tyrell  | KB2TJK |
| Glenn   | KB2MDR |

## FLARC Receives A Generous Gift

The club was a recent beneficiary of a gift of \$1,000 by a member.

All we can say is THANK YOU!!





## Past FLARC Member Profiles

Here is a list of past member features and we welcome your recommendations for new profiles -- including your own.

| Month        | Name           | Call Sign       |
|--------------|----------------|-----------------|
| January 2016 | Pete           | KB2BMX          |
| February     | Marco          | KC2ZMA          |
| March        | Ron            | KC2TBD          |
| April        | Kai            | K2TRW           |
| May          | Larry          | WA2ALY          |
| June         | Dave           | N8MAR           |
| July         | Steve          | WI2W            |
| August       | Thom           | W2NZ            |
| September    | Brian          | KD2KLN          |
| October      | Brad           | KM2C            |
| November     | Al             | WA2OWL          |
| December     | George         | W3EH            |
| January 2017 | Fred           | W2ABE           |
| February     | Dave           | KD2MOB          |
| March        | Randy          | WU2S            |
| April        | Lee            | KD2DRS          |
| May          | Gene           | WO2W            |
| June         | Carol          | KD2NMV          |
| July         | Kevin          | KC2KCC          |
| August       | Robert         | KD2NOG          |
| September    | Robert         | KD2BKD          |
| October      | John           | KD2NRS          |
| November     | Fred           | W2AAB           |
| December     | Margaret       | W2GB            |
| January 2018 | Brian          | KD2OAZ          |
| February     | Bennett        | KO2OK           |
| March        | Van            | W2DLT           |
| April        | Aly            | ALØY            |
| May          | Bruce          | NJ2BK           |
| June         | Dave           | N2AAM           |
| July         | Karl and Susan | W2KBF and W2SKT |
| August       | Steve          | KA2YRA          |
| September    | Paul           | K2PJC           |
| October      | Skip           | KD2BRV          |
| November     | Ed             | WX2R            |
| December     | Tom            | N2AAX           |

By the way, Randy (WU2S) has compiled a binder of all back issues of *The Resonator* and it's located in the club office. Thanks Randy!!!

Back issues are also available on our website.  
<http://newsletters.FairLawnARC.org>

## August 2019 Near and Far Net Controls

Here is the roster for net controls for the upcoming month as reported by Brian KD2KLN:

| Date      | Net Control |
|-----------|-------------|
| August 5  | NP4H        |
| August 12 | KD2MOB      |
| August 19 | W2DLT       |
| August 26 | W2KBF       |

The Near and Far Net now averages close to 20 check-ins on an average week! Cool beans.

But we need more volunteers to be net controls -- if everyone takes their turn it's less burden on the others. And it's easy. Volunteer --- don't wait to be asked (unless you really want to be flattered).

## RACES/ARES Corner (Continued)

The FL-ARES KB2FLA Net takes place every Wednesday at 7:00 PM on the FLARC Repeater. However, one Net per month is replaced with a video learning session provided by Randy WU2S. This month, we may have a video session on the 3rd Wednesday - August 21st, in place of the FL-ARES Net. Details regarding the video session will be provided in an upcoming email to our membership. Please join us every Wednesday for any updates, messages or activities which may take place. FL-ARES would like to thank the FLARC for the use of its repeater.

Now, getting back to FL-RACES:

FL-RACES was the Net Control Station for the BC-RACES Net which took place on Wednesday, July 24th. I would personally like to thank Thom W2NZ for being the Net Control Operator and Steve WA2BYX for being the scribe during the Net.

Our next FL-RACES KB2FLR net will take place on Wednesday, August 14th at 1920 hours. Please make a note of the new time. The Fair Lawn ARC Repeater is used (RX 145.47 MHz / TX 144.87, PL TX Tone 167.9 Hz). Thank you to the Fair Lawn Amateur Radio Club for permitting FL-RACES for using the repeater.

The volunteer efforts of our members are very much appreciated.

## Dr. Alan Katz K2UYH Talks EME To FLARC

On the eve of the 50th anniversary of the Moon landing, Dr. Alan Katz K2UYH spoke to a crowd of 44 members and guests about EME (Earth-Moon-Earth) communication and how it is becoming easier to work our planet's closet neighbor and farthest repeater. In a well executed presentation, Dr. Katz walked through equipment, hints and kinks, and handled a large number of questions from an eager and enthusiastic crowd.

Despite sweltering temperatures outside and mid-Summer holidays, the FLARC speaker series continues to grow in interest and enthusiasm. Thanks to all!!

*Tnx Don N2PRT for the pix.*



Dr. Katz makes a point



Part of the crowd on a hot and sultry night



Larger than life!!



L to R: Van W2DLT, Al K2UYH and Brad KM2C



Some guests from Roseland ARC!



Visitors including ARC Squared ARC

## **Around the Shack**

By Hal Kennedy N4GG

### **RFI Within the Shack**

At one point in my career I had responsibility for a large EMC/TEMPEST lab - a fun place to work for any technically-minded ham. EMC (electromagnetic compatibility) labs consist of a room-sized test chamber with copper walls, floor and ceiling. The copper is there to keep any RF from getting into the room from outside. Inside the room the walls and the ceiling are coated with RF absorbing materials. Also in the test room are a receiving antenna and other specialized sensors looking for RF emitted from an article placed there to be tested. See Figure 1.

TEMPEST stands for Transient Electromagnetic Pulse Emanation Surveillance Technology. Aerospace has jargon that just won't quit. TEMPEST is mostly the means to measure emissions from things like computers. Did you know emissions from many computers can be detected at a significant distance, and with smart signal processing it can be possible to know what the computer is doing? Its computer eavesdropping.

Hams are not concerned with TEMPEST – if someone wants to watch my shack computer decode FT-8 from a van across the street – more power to them. This column is about EMC (electromagnetic compatibility), something hams do deal with in their shacks. I've only mentioned TEMPEST as a possible point of interest. We live in the post-privacy era.

Ham related EMC issues come about two ways: via radiated emissions and conducted emissions. That's more technical jargon, and we usually refer to unwanted man-made noise as "RFI." I think it's important however, to realize that RFI can be received "off the air" (radiated emissions) and also through things like power supply cables (conducted emissions).

The radiated emissions cases are treated thoroughly in the handbooks, QST articles (see the archives) and myriad places on the web. RFI sources include everything from electric fences to your neighbor's plasma TV set. Computers and LCD monitors are other sources encountered frequently. Lightning is also a source of RFI, one you might think you can't do much about. That's not quite true if you can steer your antenna. Place the null of your antenna in the direction of the storm – that helps. If the storm is overhead however, it's time to go QRT and disconnect.

The topic I'd like to highlight (finally!) is conducted emissions – one we often overlook. In a well appointed station there are A LOT of wires coming in and out of our rigs. Power cables (120 VAC or 13.5 VDC), PTT lines, keying lines, microphone lines, speaker lines and on and on. Every one of those input and output lines breach the shielding (the metal case) our rig provides. Oh, and let's not forget the recently added (and very noisy) RS-232, and/or Ethernet and/or USB connections. And the little "wall wart" power supplies.

Well designed and physically larger rigs have room inside the case for shielding and filtering on the input and output lines to prevent noise current flowing on the connecting wires from reaching receiver components inside the radio. Smaller rigs, even supposedly well designed ones, don't have the room for the chokes and the shielding techniques needed to keep outside noise sources from being conducted into the radio through unwanted paths.

How do we know if we have receiver noise from conducted emissions? It's pretty simple – turn on your radio with a dummy load connected. Tune the radio carefully. What do you hear? You should hear white noise and nothing else. The white noise should be below S-zero and not change dramatically as you sweep in frequency. If you hear birdies, frequency ranges that are noisier than others, etc, your rig is probably suffering from noise being conducted in via one line or another.

## Around the Shack

Finding conducted noise sources is straightforward. Start unplugging cables. With some luck you will find the cable or cables that are the culprit.

The “fix” can be simple as well. Figure 2 shows the ubiquitous clamp-on ferrite core that will sometimes magically cure receiver noise problems. There is no magic involved however. Clamp-on cores form a common mode choke that stops the flow of noise current from the connecting wires into the radio. We see these chokes in many places - they are on the I/O lines of most computers including, importantly, on in-line power supply wires. They are also on the power and signal cables of LCD monitors.

Often, clamp-on cores are not good enough to solve conducted emissions problems, and there is a more robust solution where needed. Figures 3 and 4 show common mode chokes made from winding cables around ferrite cores. For hams, number 43 cores are a good choice.

Do these work? I have had great luck with them. Figure 4 shows a common mode choke for an AC power cord. I used such a choke on the power cord of an Ameco preamp years ago and it turned a very noisy preamp into a very quiet one. We sometimes think AC power connections are a source of 60 Hz hum and that’s about all. It’s not the case! Power connections, 120 VAC or 13.5 VDC, are the number one culprit for conducted emissions over very wide RF frequency ranges.

DC power lines are often the worst noise conductors of all. Many radios do not include a built-in power supply. Here are some examples: FT-857, K3, TS-450 and the IC-706. I can name one or more from every manufacturer. Many of these radios are physically small and don’t have the room inside for first-rate chokes and shields. When diagnosing noise entering externally-powered radios the DC power lines should be tested first – starting there can yield quick results. That is done by powering the receiver from a battery and seeing if receiver noise drops. If it does, add a common-mode choke by wrapping both leads of the power cord around a ferrite toroid – Figure 4. If you don’t wish to build your own common-mode chokes – there are commercially available chokes made for amateur stations. An example is shown in Figure 5. Here is a link to some of these products: <https://www.arrayolutions.com/ac-7b>

The worst of the worst noise sources are switching power supplies, although RS-232, Ethernet and USB connections are not far behind. Imagine the noise conducted on a gigabit Ethernet cable! If at all possible, use linear supplies in the shack – not switchers. Linear supplies cost a little more but they are worth it. Astron supplies are clean as a whistle. Cheap switching supplies are often a disaster.

The “bias-T” is a device for inserting DC power onto a coax run at the shack end, and stripping the DC power off at the far end. Bias-Ts must be powered with clean DC voltage – they are injecting whatever power supply noise there is directly into the antenna jack of the receiver. Bias-Ts should always be powered from a linear supply.

At N4GG I use an Astron linear 5 amp supply to power all the accessories. It was worth the investment - made over 30 years ago. I use an Alinco DM-330MVT switching supply for testing rigs, charging batteries and non-critical applications. It is the quietest switching power supply I have found and there is a reason it’s so good - it has two common mode chokes inside the supply – an excellent design.

I hope this helps you hear weak signals with your receiver free of unwanted conducted noise.

73,

Hal N4GG



## Around the Shack

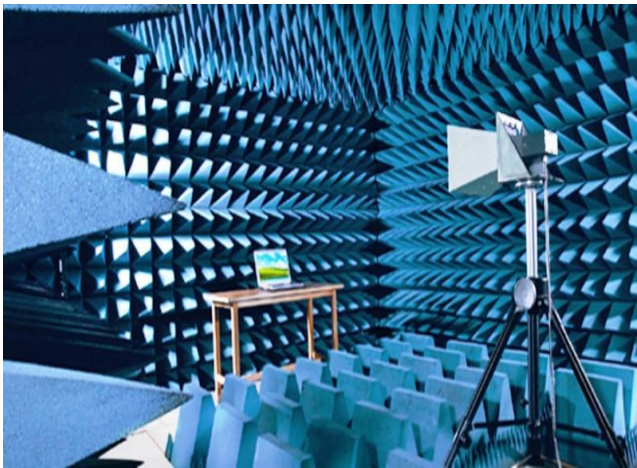


Figure 1. A typical TEMPEST lab



Figure 2. A clamp-on ferrite core

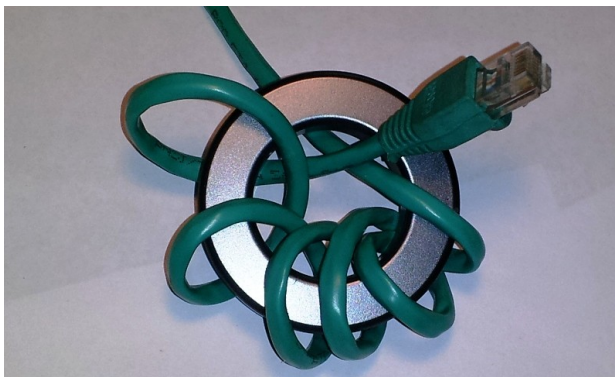


Figure 3. A common mode choke for Ethernet cable



Figure 4. A common mode choke for power lines



Figure 5. A commercial AC power common mode choke



## Van Fest IV

Perfect weather, lots of food, multiple fox hunts and good friends marked Van Fest IV at the QTH of Van W2DLT and his wife Lori. With 44 FLARC, FRC members and friends in attendance, a perfect... perfect day. Thanks to Van and Lori!! The rite of mid-Summer passage is no longer the Sussex hamfest!! *Tnx Tom N2AXX for the pix!*



## FLARC VINTAGE NIGHT IS AUGUST 16, 2019

*FLARC is pleased to host its second Vintage Night on Thursday, August 16th at the **Fair Lawn Senior Center, 11-05 Gardiner Road** in Fair Lawn beginning at 7PM. The program is free and refreshments will be served.*

Last year, we reconstructed the club's original 1961 Novice station equipment, which actually dated from the mid-1950s. This year, we will feature a typical Novice station from the early to mid 1960s.

Our transmitter will be a Heathkit DX-60, with a Heathkit HG-10 VFO. We may also operate on crystal control. The receiver will be a Drake 2B, with matching 2BQ Q-Multiplier/Speaker. Don't know what a "Q Multiplier" is? Find out at our Vintage Night.



Heathkit HG-10 VFO with DX-60 Transmitter

Image: <http://www.mcrn3885.net/radiopix/heathkit/heathkit.htm>



Drake 2B Receiver with 2BQ Q-Multiplier/Speaker

Image: <http://www.bdweb7057k.bluedomino.com/oldradio/arrrl/2006-05/drake-2b-2bq-2nt.htm>

If you're not able to attend, but would like to work us using this vintage station, look for us starting in the 7 PM local time hour on 40 meter CW around 7.030 to 7.035. We will either be using our club call, W2NPT or Fred's personal call, W2AAB.

We will be on 80 meter CW from approximately 7:30 local time to sometime past 8:00, around 3.550 to 3.560 (QRP stations take note).

Then, we will switch to 75 meters, and operate on AM phone around the usual "AM watering hole" between 3.880 and 3.885, but possibly lower in the 3.800 range. The DX-60 is expected to put out about 40 watts in AM mode.



## FLARC VINTAGE NIGHT IS AUGUST 16, 2019

Sometime during the evening, we will also set-up a short 2 meter AM phone contact between two Heathkit "Twoers," running about 2 watts output. Our frequency will be just below 145.0 MHz, and we will only be using simple,  $\frac{1}{4}$  wave antennas, in order to avoid any possible interference to FM stations.



Heathkit model HW-30, "Twoer"

Image: <http://mnarc.org/news/2014/09/a-bit-of-history/>

The Heathkit "Twoer" was also a popular Novice rig in those days, when Novices could operate on the 2 meter band. The "Twoer" was possibly the most popular VHF rig of all time, used by all license classes during the 1960s.

### About Our Vintage Night Organizer -- Fred Belghaus W2AAB

Licensed since July, 1962, Fred is an active CW operator, whose first love in ham radio is DXing, followed by contesting. He has been a teacher, broadcast engineer, journalist, sales manager in the electronics industry, and contract administrator for a multinational distributor of aerospace parts. Currently retired, he writes a monthly historical column for the FLARC *Resonator*, and serves as freelance content writer for internet businesses. Here he is during Winter Field Day 2018.



## **Tim Duffy K3LR and His Superstation Highlights FLARC September 20th, 2019 Speaker Series**

As part of our 2019 FLARC Speakers Series, the club is honored to have one of the top amateurs in the country on our program. The program is titled: *An Inside Look At A Superstation*.

Tim Duffy K3LR will discuss his superstation, which is located in West Middlesex PA, on Friday, September 20th at the Fair Lawn Senior Center, 11-05 Gardiner Road in Fair Lawn beginning at 7PM. The program is open to all and refreshments will be served.

*This will be a presentation from Tim's station via Skype, a first for FLARC in this long running series of speaker programs.*

Tim has been an active amateur radio operator for 47 years. He has hosted 132 different operators from around the world as part of the K3LR Multi-Multi DX radio sport contest efforts since 1992. He was the ARRL Atlantic Division Technical Achievement award winner in 1998.

Tim was moderator of the Dayton Contest Forum for 10 years and has been moderator of the Hamvention Antenna forum for 34 years. He is a founding member and current President of the North Coast Contesters. K3LR serves as chairman of Contest University (13 years), the Dayton Contest Dinner (27 years), chairman of the Top Band Dinner – as well as coordinator of the Contest Super Suite (34 years) in Dayton during the yearly Hamvention.

He is founder and moderator of the popular RFI Reflector ([RFI@contesting.com](mailto:RFI@contesting.com)) since 1999. He has been a guest on Ham Nation many times. Tim was a member of Team USA at the World Radio Team Championship – five times, most recently in Germany during WRTC2018 with Sandy, DL1QQ. Tim serves on the board of directors of the World Wide Radio Operators Foundation (WWROF) as Chairman and is President Emeritus of the Radio Club of America (RCA). Tim is President of the Mercer County Amateur Radio Club (W3LIF).

Tim was elected to the CQ Contest Hall of Fame in 2006. He was honored with the prestigious Barry Goldwater Amateur Radio service award by the RCA in 2010. K3LR was honored as Hamvention Amateur of the Year in 2015 by the Dayton Amateur Radio Association. Tim is the Chief Operating Officer and General Manager at DX Engineering. He is a graduate of the Pennsylvania State University.

So save the date -- September 20 -- for an inside peek at one of the most outstanding amateurs in the country today and a personal tour of his world-class operation.



Tim Duffy K3LR

## FLARC AND TRCA PARTNER ON "KIDS DAY"

For the first time, the Tri-County Radio Association and the Fair Lawn Amateur Radio club collaborated for a "*Ham Radio Day for Kids*" event adjacent to the Union County Office of Cultural and Heritage Affairs in Elizabeth on July 27th. An estimated forty kids, parents, and visitors took part in a day of exploring amateur radio.

Modeled on earlier FLARC successes, the event was intended to introduce various aspects of amateur radio to local families and their children. The clubs presented ham radio as a family activity that complements STEM education, provides opportunities to teach about the fun of amateur radio, the role it plays in providing public service and how the hobby further enriches one's understanding of cultures, geography and history.

Activities included a Morse Code "class", a mini-foxhunt, a demonstration of MESH networking, a solar telescope with some words about the relationship between sun spots and radio propagation and, of course, operating stations for voice, CW, and FT8.

Paul Biener KD2DRM from TCRA and Randy Smith WU2S from FLARC took the respective leads on this project in what turned out to be a rewarding day for all. A great turn-out from both clubs and perfect Summer weather added to the fun.

A big TNX to Jim W2JC, Dave N2AAM, Randy WU2S, Van D2DLT, Larry WA2ALY, Brian KD2KLN, Nomar NP4H, Karl W2KBF, John W2JLH, Ed WX2R for helping and to Aly AL0Y, Noel W2MSA and Ria N2RJ for visiting and supporting FLARC.



FLARC and TRCA pose for a group picture

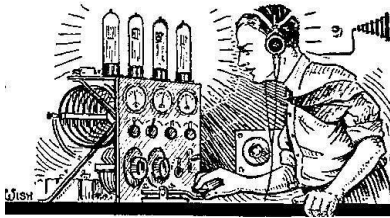


L to R: Jim W2JC and Randy WU2S pose with the scout organizer and scout



Larry WA2ALY works his Morse magic with some kids under the FLARC tent





**The Way We Were --**  
**By Fred Belghaus W2AAB**

## The East Coast Chronicles – Part 2

**Synopsis:** Last month, we gave a short introductory history of the 2 meter band, its humble beginnings, and slow but steady growth. We reported on the introduction of channelized FM operation, and the changes that it wrought. We gave some examples of evolving changes in mores, and suggested that these changes would have far reaching effects on the band later on. This month, we will give more specifics of these changes, and how they produced sometimes comical, sometimes disturbing results.

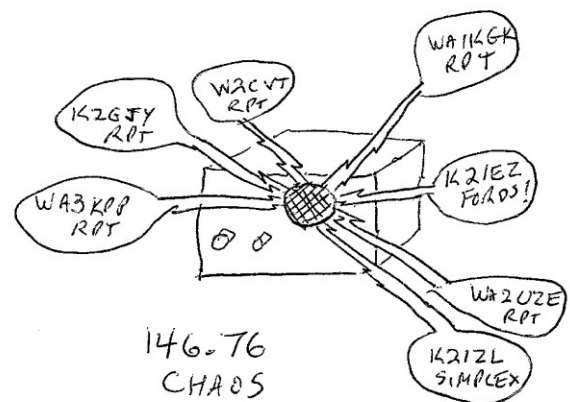
### Warfare

146.76 was a very busy frequency. There were five repeaters active there, all located within about 50 miles of each other. One of them used a “secret” input frequency. A sixth repeater, in Eastern Pennsylvania, made its appearance later, thus adding to the mayhem when the band opened a bit.

Back then, there was a repeater started by Burnie Dodge, K2GJY, at his home. A group of us were involved in this project, which later became the Bergen County FM Association's repeater -- these days more commonly known simple as "the Paramus repeater." These are some stories from that early pioneer repeater group.

Our repeater in Ridgewood used a 146.28 in, 146.76 out pair. Others used 146.34 in, 146.76 out. These pairs were optional, and were set-up before the standard 600 kHz split was established nationally. Our repeater was at the home of one of our members on Claremont Road in Ridgewood, but it would soon be relocated to Paramus. Another repeater was up on Mt. Beacon, in lower New York State. A third was down in Fords, New Jersey. A fourth was out in the Huntington area of Long Island, and the fifth was in Connecticut, but it also put in a nearly full-quieting signal. There was also occasional simplex activity on “seven-six” from one or more of these groups, including our own.

To say that things could get a bit dicey is putting it mildly. Those were the days before PL was widely used on repeaters, and none of the five repeaters on seven-six had PL. Chaotic is a better word to describe “seven-six.” With just a slight band opening, repeaters would be keyed in all five places at once. Even when the band wasn't open, anyone driving to a higher elevation, or driving within range of one of the other repeaters, often brought up at least two of them at the same time, resulting either in the complete blanketing of one, or that distinctive “grinding” sound that is heard when two nearly equally strong FM signals transmit at the same time on the same frequency, rendering both unintelligible.

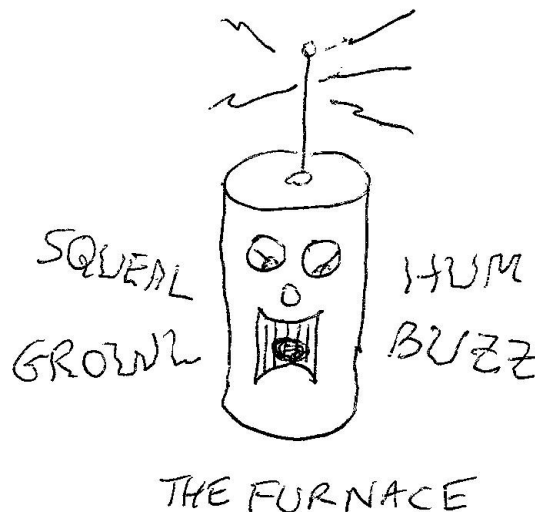


## The Way We Were

The solution, of course, was to equip our repeaters with sub-audible tone encoding or "PL" -- a Motorola term meaning Private Line. (G.E.'s term was "Channel Guard," and RCA's term was "Quiet Channel"). In some cases, PL was also applied on receive as well, insuring that only one's own repeater could be heard, regardless of how strong another repeater might be heard without this feature. What became necessary, then, was coordinating with other repeater operators on frequency, to make sure that each group used a different PL tone. Our group chose "4A," (a Motorola designation), which is 141.3 Hz. The others used different PL tone frequencies.

The PL was provided by a slender, copper-enclosed module with a vibrating reed inside and terminals on the bottom, which drew current from the rig's power supply to set the reed vibrating. These had to either be squeezed somewhere on the rig chassis (not an easy feat, since many of the commercial rigs left little chassis space vacant), or mounted on an external small box or chassis. To add PL to my own rig, for example, I had to mount mine on an external, small chassis and bring the wire leads inside and under the chassis of the rig; a nuisance, but a necessary one. If you wanted to be more elegant, you added a switch to turn the PL on or off, when not needed. I added a switch to mine, for when I was on simplex or on another repeater that didn't use PL.

You'd think that would be the end of it, right? Wrong. One of the groups kept their PL tone secret, as well as their input frequency. To make matters worse, their repeater came on with a low frequency rather raucous "noise" that cannot easily be described. The closest approximation of this noise was that it sounded like an old, oil-fired furnace starting up, accompanied by a hum and distorted audio that persisted during every transmission. This repeater therefore acquired the nickname, "The Furnace."



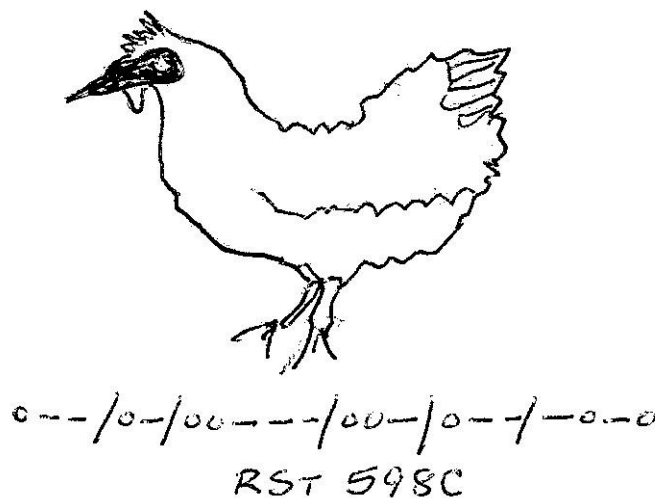
Perhaps they just didn't hear the other repeaters on seven-six, and the many complaints about their signal. Perhaps they used no more than a bent coat hanger in their antenna jacks to receive. Perhaps they kept their squelch so tight that none but local signals could be heard. Or, maybe they just didn't care. Whatever the reason, the "natives" among the rest of us were getting very restless, indeed. Some were prepared to engage in outright warfare. Some suggested hammering pins in their repeater's coax, or lassoing their base station antenna with a length of stout rope, then attaching the rope to a small truck, and pulling away at high speed. Still others suggested things better not mentioned. Some communication was attempted, and finally, cooler heads prevailed. Nevertheless, "The Furnace" continued its noisy presence on the frequency for a long time. The only way to no longer hear it, was to equip your rig with PL on receive, that would only respond to your own repeater. Very few people did this, though.

## The Way We Were

With the establishment of standard 600 kHz spacing between repeater inputs and outputs, the former chit-chat frequency of 146.94 was now designated primarily for repeater outputs, paired with 146.34 as the input frequency. Nine-four became useful for simplex only as a “calling” frequency, with 146.52 now designated as the preferred simplex channel, along with 146.58, although five-eight had already been established as the audio frequency channel for those running Amateur TV transmitting fast-scan video on 439 MHz. Our own group chose 146.91 as its designated simplex chit-chat channel, to prevent possible interference with the new repeater on nine-four. Later, when one of our members built a repeater with output on nine-one, not far away in Yonkers, New York, we made our simplex home on five-two.

Nevertheless, there were certain stalwarts who continued to operate on nine-four simplex, often with high power base stations, and using commercial-grade Stationmaster antennas on towers. One of these, located in Ridgefield, Connecticut, consistently put in a full quieting signal at my QTH in Fair Lawn. Two others, down in the Jersey Shore area, were inveterate ragchewers. One had the nickname “Chief,” (AKA “Lungs”), the other “Stosh.” Some of the others could be reliably heard over the entire New York metropolitan area, including the area covered by a new repeater in the Watchung Mountains about 30 miles away.

This new repeater on nine-four was “open,” meaning, in those days, that no PL tone was required to access it, so anyone could use it. And many did, including many visiting amateurs from other parts of the country. Its CW identifier was most unusual, though. It had a chirp. Not a slight chirp, as was often heard on Novice transmitters in those days, but a chirp so pronounced that it sounded rather like a chicken. Thus was this new repeater dubbed, “The Chicken Machine.”



Some of us wanted to put that “chicken” in the oven and roast it. The name persisted for some time, until the repeater operators changed the ID to something quite different. This time, instead of a chirpy CW ID, the voice of one of the members’ wives was recorded, announcing the call letters at required intervals. This, too, soon elicited some rather colorful remarks which will not be repeated here, and which would be considered, today, as decidedly “politically incorrect.” Despite these remarks, and almost in defiance of them, the same ID was used for many years.

## The Way We Were

Meanwhile, a number of other groups decided to join the fray, and within a couple of years every standard repeater frequency pair was occupied, including some “private” repeaters with secret, non-published PL tones. The situation once again called for drastic action, in response to the growing number of repeater groups emerging. Repeater outputs were normally spaced 30 kHz, e.g., 146.82, 146.85, etc. The solution now was to split these 30 kHz spacings in half, thus making repeater inputs and outputs separated by 15 kHz increments. The same applied to simplex channels. For example, if a standard repeater frequency pair was 146.28 in, 146.88 out, the new “split” adjacent channel assignments would be 146.265 in, 146.865 out on the low side, and 146.295 in, 146.895 out on the high side. So far, so good.

Unfortunately, even with this effort, some problems were encountered by groups using older commercial equipment with “wide” receivers, enabling them to hear signals from the adjacent channel, causing a new form of interference to established repeaters. And so, the war was underway again. Frantic repeater clubs used PL, or changed their PL tones to keep out unwanted signals from their nearby frequency neighbors. Some went to 1 MHz split, and some used “reversed” input and output frequencies, causing major problems to those using standard pairs, especially during band openings.

After some time, things settled down for awhile and all seemed to be well in 2 meter FM land. But within another year or so a new challenge emerged, which would prove to be another threat to peaceful coexistence on the band. It was a problem that no one wanted, but it became an inevitable consequence of advances in technology, driven by the hunger for profits. FM operation on 2 meters would prove to become a victim of its own success.

Up to this point, all FM operation was by the use of converted ex-commercial transceivers. Many rigs were single frequency, with crystal stability maintained by the use of crystal ovens, in accordance with commercial 2-way radio practice. My main FM rig was an Aerotron “600” (sometimes referred to as an “FM lunchbox”) which, like most other equipment, had only single frequency capability. If I wanted to switch to another frequency or repeater pair, I had to reach inside (with gloves on, because those ovens could get pretty hot), pull out the crystal oven containing the crystals for whatever frequency I was on, unplug it, and replace it with another crystal oven containing the frequency or repeater pair that I wanted to replace it with.



Aerotron “600” – Image: picclick.com

I ended up leaving the cover off my Aerotron so that I could change frequencies fairly easily. Besides, I was too lazy to add additional frequencies to the rig. More ambitious operators than me added an extra socket or several more sockets on a sub-chassis to accommodate additional crystal ovens, each containing additional frequency crystals, and then adding a multi-position switch to select each one. The term “dual freq” (pronounced “dual freek”) meant a rig capable of two frequencies, or “multi freq” for more than two.

## The Way We Were

Small, easily carried commercial-grade HTs ("Handie-Talkies") became available to hams on the used market around 1970. The first one I remember was the Motorola HT-200, soon followed by the HT-220. G.E. and others made similar models. These were "high band" hand-held units, usually easy to convert to 2 meters. They were single-frequency and usually ran 5 watts output. They were ruggedly built, but larger than today's HTs. The difference was that the commercial HTs could literally be dropped off a building and still work. Try that with a Baofeng! What the older HTs lacked in extraneous features was more than made up for in engineering quality and reliability.

All this was about to change. Several American manufacturers, seeing a new potential market, began to produce small, compact, fully solid-state, channelized transceivers. These were primarily intended for mobile use, but A.C. power supplies were also available at additional cost. These rigs already had multi-frequency capability built in, some offering up to 6 or more channels that could be selected by the simple twist of a knob. The transmitters typically ran 10 to 15 watts output, and looked exactly like CB rigs, a resemblance that did not escape those of us using commercial-grade equipment.

The earliest of these that I can find was made by International Communications and Electronics, Inc. (commonly called "ICE"), of San Antonio, Texas.

# AT LAST!

## 2 Meter FM Transceivers



## Specially For HAMS

\* FULLY TRANSISTORIZED \*\*\* NO TUBES \*

- \* Operates on \* 117 VAC \* 12 Volts DC \* Or Optional Internal Batteries \* Self-contained 3 x 5 speaker \* Strong fiberglass EPOXY printed circuit boards.
- \* Power supply even regulates and filters on 12 VDC operation \* cannot be Damaged by reverse polarity \* 21 transistors \* 14 diodes \* Double conversion Crystal controlled receiver with 3 full watts of audio output and better than .3 micro volt sensitivity (12 DB SINAD) \* Transmitter and receiver may be ordered in either wide or narrow band at no extra charge (wide band supplied unless specified) \* Small size 8" w X 3 1/2" h X 9 1/2" d \* \* Light weight — less than 4 1/2 pounds \* \* True FM receiver not a slope detector \* \* push to talk \* Built in 117 VAC power supply \* Simply plug in proper power cable for either 117 VAC or 12 VDC Operation \* Transmitter power output 4 watts minimum \* \* \*

|   |          |
|---|----------|
| Complete with one set of crystals on 146.94 Mhz, 117 VAC and 12 VDC power cables, less microphone and antenna | \$285.00 |
| Extra crystals (transmit or receive)  | \$7.00   |
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Phone 512 341-1311

Number 14 on information card



## The Way We Were

This ad first appeared in the July, 1968 issue of *FM Magazine*. The rig ran 4 watts output, and had 3-frequency capability, but still employed wideband (15 kHz) deviation, which made it compatible with the vast majority of former commercial grade FM equipment in use at that time. To those of us still using the commercial equipment, though, it may have been a small step forward technologically, but a giant leap backward in another way—making FM available to every Tom, Dick and Harry, who had not “earned their stripes” by converting the older rigs, and learning much more, technically.

“ICE” wasn’t alone. By 1970 or so, they were joined by several other manufacturers, including some well-known companies like R.L. Drake and Clegg Laboratories. Others included Standard, Varitronics, and Genave (best known for their C.B. rigs)! Their advertising appeared first in *FM Magazine*, but soon after in *QST*, *CQ*, and *Ham Radio* -- the three major, mainstream amateur radio publications.

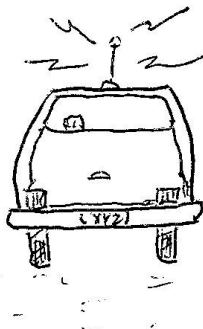
*He who opens the floodgates wide  
Has no hope of stemming the tide.  
--Anon.*

And indeed, the floodgates were opened wide. Seemingly overnight, many new stations appeared on the repeaters. Many were newcomers, inexperienced in amateur operating and having no clue about how to operate in the more arcane subculture of FM. Instead of the mainly technically competent operators already active, these newcomers had little or no technical knowledge, and were purely “appliance operators,” who “bought a box.” Some, easily identified by their lingo, were obviously recent transplants from CB, possibly attracted by the concept of “channels” as opposed to discrete frequencies that had to be tuned.

For the first time in history, I began hearing these former CBers now referring to their rigs as “radios.” There are few things more annoying to an experienced amateur radio operator than to hear this term. A “radio” is something on a table or carried on one’s shoulders that plays music (of a sort). Hams have RIGS, not “radios.”

Of course, all this provoked tensions in the FM world, and considerable resentment. Those of us with commercial rigs looked down upon these operators, scornfully dismissing their solid-state, CB-like boxes as “plastic toys.”

NEWLY-LICENSED MOBILE  
EQUIPPED WITH “PLASTIC TOY”



“YEAH TEN-FOUR GOOD BUDDY.  
I’M ALMOST AT MY #20\* NOW  
SO I’M GONNA GO TEN-SEVEN-”

## The Way We Were

The result was that the repeaters were now constantly busy with hundreds of new operators, usually mobile, cluttering up the frequencies with idle chatter, day and night, but especially during rush hours. Our own repeater, now in Paramus and now operating on the 146.19 input, 146.79 output pair, logged more than 100 operators active on it, less than half of whom were paying members of the club. Some repeater groups responded to this crisis by laying down strict rules for operating, such as limiting conversations to five minutes or less, designating rush hours for “mobiles only,” and if someone needed assistance, a silent period during which only those in need and those assisting were allowed on the repeater.

Our own repeater was originally set-up primarily for CD-RACES operation, and we were cautious about frivolous or illegal operating, so we established a “Good Grammar Committee,” (a riff on a TV commercial at the time by a cigarette company, whose ads asked the question: ‘What do you want, good grammar or good taste?’). Its purpose was to monitor the frequency and insure approved operating technique, and apply disciplinary action to violators.

Our “Good Grammar Committee” actually consisted of only one gentleman. He weighed about 300 pounds, and sat before his huge, rack-mounted, 100 watt Federal base station, eagerly awaiting every opportunity to pounce (figuratively, at least) on every hapless offender. One of his pet peeves was long-winded ragchewers. He would shout into his microphone, “Why don’t you guys go to nine-four?” Later, when nine-four became a repeater output frequency, he shouted, “Why don’t you guys go to nine-one?” Finally, when nine-one became a repeater output, he changed it yet again to “five-two,” the only popular simplex frequency left.

Many of us secretly wondered how long it would be before somebody parked a repeater output on five-two, also, but that never happened. Five two has remained in its virginal state of grace as a simplex frequency.

Unfortunately for our “Good Grammar Committee” and its official frequency cop, his old Federal base station was wideband, and when he shouted into his microphone, his signal went clear out of the repeater receiver’s pass-band, and hence, also out of hearing by his targeted offenders, which only got him madder. I’ll have more to say about our official frequency enforcer shortly.

## Characters

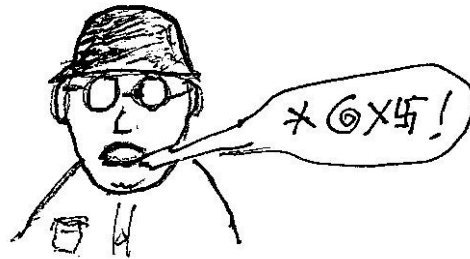
Long before the days of cell phones, there was a type of operator on 2 meter FM that came to be known as “Adam 12 types.” Adam 12 was a once popular TV cop show. “Adam 12 types” were guys who drove around aimlessly in their cars looking for some “incident” to report to the authorities, such as disabled vehicles, accidents, brush fires, and the like. They would use what was then known as the “autopatch” to make these calls. An autopatch was a kind of phone patch (once common on HF), that could be activated by dialing a certain sequence of numbers on a touchtone pad, which provided a telephone connection through the repeater. Calls could be made from your car to call 9-1-1, for example, or the Fire Department, etc.

The concept was good, but sometimes it was abused, as some operators made frivolous calls, tying up the repeater and excluding those with a legitimate emergency. I remember hearing one guy making an autopatch call for no better reason than to call a pizza joint and order a double cheese, sausage and pepperoni to be delivered to his home. For this act of blatant stupidity, he was suitably chastised.

Not all repeaters had an autopatch, so some of the “Adam 12 types” would get on the air and beg someone to call the cops because there was somebody parked on the shoulder of the Long Island Expressway with nothing more serious than a flat tire. This, too, was a problem, though not a serious one. It was merely annoying. Again, rules had to be imposed either prohibiting such practices, or requesting operators to use better judgment.

## The Way We Were

On our Paramus repeater, like many others, there were a number of “characters.” One of our guys worked for a local Motorola repair shop. I’ll call him “Adolf.” He used to drive a beat-up panel truck covered with 2 meter and 440 antennas. He had a fascination with firearms, and a collection of World War II Nazi artifacts. Sometimes, he was heard whistling a few bars of “Deutschland, Deutschland Uber Alles.” In his youth, I was told, he delighted in pulling the wings off flies and torturing small animals. Even more troubling was his open dislike of certain racial and ethnic groups, frequently egging them on, and looking for a fight. We tried to keep our distance from him, but sometimes, contact was unavoidable (and embarrassing), particularly when he wore his Nazi helmet at repeater club meetings.



One night, I heard him on the repeater telling “Polish jokes.” Another of our club members, a proud Polish-American, took “Adolf” to task in no uncertain terms. The argument escalated, and might have ended in violence, until our “Good Grammar” guy stepped in and put an end to it, threatening to shut the repeater down, and banish those involved.

Another member, an FBI Agent, recently transplanted from W4-land, upon discovering “Adolf’s” fascination with firearms and loose-cannon behavior, once remarked, “Shoot, man, I wouldn’t give *him* no gun!” “Adolf” was watched from then on by higher authorities. Fortunately, he gave us no further trouble.

I once drove down with our club president to visit a certain member in the central part of the state. He was building a VHF repeater for Navy MARS using some military surplus equipment and evidently having some difficulty getting it to work. Our president offered to help, and I went along for the ride. The guy, whom I will call “Turkey,” invited us down to his workshop in the basement. It was like trying to negotiate an obstacle course.

The entire floor, except for a path about a foot wide, was occupied with piles of inoperative FM equipment, much of it rusty and with parts missing, as well as a large horde of rusty power transformers and huge cartons of tubes, most without boxes, thrown together in a kind of “stew” of neglected electronic glass. I don’t know whether “Turkey” ever got his repeater working. I just wanted to leave there as soon as possible.

Another member of our group was “Boris.” He worked as a Field Rep for Motorola. Sharp technically, he was our official chief troubleshooter when difficult technical problems needed solving. An affable guy, “Boris” particularly liked the ladies. After spending his days working with customers, he spent his nights entertaining a bevy of female companions. We lost count of how many. He was therefore, our resident lothario, too.

“Uncle Sid” owned a company that sold fasteners, which he often referred to as the “screw works.” He was never seen or heard unless chomping on a big cigar. Occasionally, “Uncle Sid” would get frustrated when trying to break into a QSO, if people didn’t acknowledge him. The problem was that with that huge stogie in his mouth, he had to first remove it, and then speak into his microphone, and the pause between these two led many to believe that someone was just dumping carriers, and not really breaking in. Our belated apologies, “Uncle Sid,” sometimes we just didn’t know.

## The Way We Were

There was a class of operators that were known as “wheeler-dealers.” The most prominent (and notorious) of these was a chap who acquired the nickname of “Supply Sergeant.” He was always able to offer late-model, high quality, and normally quite expensive pieces of laboratory grade test equipment at “special discount” prices. He also regularly traded in recently manufactured, professional grade FM mobile equipment (especially Motorola), normally priced far out of reach to radio amateurs. Just how he came upon these exotic offerings is unknown, and nobody asked, as far as I know, even when it was discovered that their serial numbers had been removed.

His house was more of a stockroom than living quarters. Every room, including the kitchen, was piled high with a variety of commercial electronic equipment. There was an abundance of 2-way FM equipment, test equipment, and some unidentified items of an industrial nature. The basement, too, was packed with more stuff, including a seven foot high equipment rack containing a former shipboard receiver with separate plug-in tuning units covering all frequencies from LF to above 10 meters.

One night, I was in the basement “shack” of our repeater’s founder with a few other club members. The “Supply Sergeant” arrived, requesting our assistance in carrying in his latest offering. Four of us lugged a huge, lab grade frequency counter into the basement, and laid it on the test bench. He made no sale that night, however. The monster was plugged in, and began to warm up, when our repeater’s founder asked, “How much power does this big kluge draw?” The answer was somewhere above 200 watts. The repeater founder responded by promptly pulling the power cord out of the outlet with the words, “Get that damn thing out of here!”

Once, the “Supply Sergeant” was hired by a local aircraft radio repair shop owned by two partners who were also members of our repeater group. We would hear him mornings from his mobile, driving to work. Then, one day, we didn’t hear him anymore. Later, someone said that he had borrowed money from one of the partners, then allegedly skipped town. He was never seen or heard again, prompting our repeater owner to ask, “I wonder whether he’s out of the penitentiary yet?” His present whereabouts are rumored to be somewhere in the Jersey meadows, where he is keeping company with the late Jimmy Hoffa.

There was a guy I’ll call “Mister Black Box.” He was a young lad, still in high school at the time. Like the “Supply Sergeant” and many others, his basement was filled with various types of electronic equipment, the origins of which were unknown. One of these was a large-screen military RADAR set. He kept a separate VHF FM receiver locked onto a certain frequency, where a station using the tactical call sign “Snappy Tom” operated. It turned out to be a frequency used by Security at a nearby Nike Missile Base.

But “Mister Black Box” was mainly interested in techniques that were once the specialty of a select group of tinkerers—the building of devices used to circumvent the telephone company’s toll charges. (In those days, long-distance calls were charged extra). On a large bench was a half-size 19 inch equipment rack. In this rack were transmitter and receiver strips that made up his FM rig, and on the bottom of the rack, an A.C. power supply for them. Also in that rack was a home built unit with no markings. Wires ran from it to a telephone on the bench, and more wires connected to the telephone block, with a switch to disconnect it from the line when not in use. This unmarked unit was his “Black Box.”

Taped to the “Black Box” was an index card with a list of “special” telephone numbers. These numbers (mostly ending with -99nn) were used internally by the telephone company to perform a variety of test and maintenance functions. One number provided a pure, 1000 Hertz tone at 0 dBm level. Another provided an audio frequency “sweep” from zero to about 20,000 Hertz. Another number, when called from an unknown telephone, would repeat the number assigned to that phone. (This was a handy number to know when visiting a new member with an unlisted phone number).

## The Way We Were

There was another number up there. After a certain three-digit number was dialed, and after hearing a dial tone, a fourth digit was dialed, followed by a hang-up, it would cause the telephone from which the call was made, to ring. When answered, there would be only silence at the other end. This is known as a “ring-back” code. (Another handy bit of forbidden knowledge that provided considerable amusement when surreptitiously dialed when visiting other members’ homes).

One day, some representatives from the telephone company paid an unannounced visit to “Mister Black Box.” We didn’t hear him on the air for a long time after that. Later, a visit to his shack revealed the absence of the “black box.” I didn’t have to ask him what happened to it.

“Jungle Jim” drove around in a Range Rover, and frequently wore clothes appropriate for someone on an African safari. He hated hippies, and used a vocabulary heavily salted with racial and ethnic slurs. I don’t know whatever became of him, but perhaps he and “Adolf” started their own club that met in a bunker.

There was another guy who came to be known as “The Banana.” He ran an ancient, wideband, commercial FM rig whose audio featured a variety of hums, buzzes, squeals and odd crackling noises, as if something was about to burn up. It never did, but his signal provided the rest of us with some late night entertainment, some of us making bets on whether his rig would burst into flames before he finished transmitting.

Then, there was “Twinkle Toes.” A recently-licensed amateur, he once appeared at a repeater club meeting sockless, and wearing open-toed sandals, thus quickly acquiring his nickname. He never tired of bragging to everyone that he had an Advanced Class license. I remember him once asking another guy how to solder coax to a PL-259 connector. Maybe he’s an Extra by now.

There were two guys on our repeater with the name Pete. The younger of the two, and a good friend of mine, was called “Petelet,” to distinguish him from his older namesake. “Petelet” had a younger brother. One day, Pete and I were visiting another member’s home, when he was called by a station with call letters that I did not recognize. Pete answered the call on his G.E. portable rig. The person calling him with the unknown call letters turned out to be Pete’s younger brother. “Gee, Pete,” I said, “I didn’t know your brother had a license.” A smile came to his face. “He doesn’t,” Pete said. His brother had “borrowed” somebody else’s call letters to tell him, “Mommy says to come home *right away*.”

The other Pete in our group was known as “Meat Head,” not because he was one, but because it referred to some clever phonetics for part of his original call letters. “Meat Head,” AKA “Peterboy,” was another “wheeler dealer,” but as far as I know, his dealings were completely honest and within the law. Once, a certain member of our group visited Pete at his then home in South Hackensack, but Pete had not yet returned from work. Pete’s wife graciously let his visitor in, having him wait in Pete’s shack until he arrived. Pete’s G.E. base station was on, and the visitor heard Pete driving home in his car. He called Pete, using Pete’s call, and adding, “Base to mobile,” in typical CB fashion. Shocked, Pete responded, “WHAAAT? WHO IS THAT?” The visitor laughed his sides off. I don’t think Pete ever quite forgave him for that.

Another time, this same “comedian,” wishing to have a little further “sport” at Pete’s expense, called him one afternoon from his mobile, using a WA1 call that he had licensed to an address in Massachusetts. He pretended to be visiting the area, engaging Pete in a lengthy QSO, even affecting a Massachusetts accent to add a veneer of authenticity to the contact. “You guys have a pretty nice repeatah down heah,” he told Pete. “Stand by while I pahk my cah.” And so it went, the whole time, Pete never suspecting a thing, and the “comedian” splitting a gut laughing. After all these years, I guess it’s time to fess up — the “comedian” in both incidents was ME.



## The Way We Were

The president of our repeater group was known by several nicknames, among them, “Fearless Leader,” “Bates,” (which was his real middle name), and “Acid Mouth.” The last of these was earned by his unchallenged ability to put people in their place by his quick-witted, acidic barbs. He worked in insults the way Pablo Picasso worked in oils.

During the day, “Acid Mouth” toiled as a mild-mannered accountant for a truck leasing firm, but at night, on the repeater, he adopted a different persona entirely. He had built the repeater using a hodgepodge of Motorola transmitter and receiver strips, power supply, and classic Motorola base station control unit with microphone. The Motorola equipment had replaced the original repeater, which used Federal units. He was quite competent technically, and could tackle most any problem that occurred. The repeater antenna was a commercial collinear Stationmaster, with low loss coax on a tower in his backyard. The repeater had a CW ID, and logging was performed on a slow-speed, reel to reel professional tape machine, which was the standard logging method in those days.

He had little patience with uninformed newcomers to the repeater, who sometimes asked rather silly, all-too-basic questions. He respected competence, though, especially when shown by those recently licensed. One of his favorite expressions was, “Quit pullin’ my chain!” When the repeater was moved from his house to the roof of the County Mental Hospital, I think he must have thought that was the perfect place for it.

“Acid Mouth’s” wife held a Technician Class license. She was a quiet, reserved individual, completely opposite that of her spouse, and seldom heard on the air, except when calling him on his way home from work to ask what he wanted for dinner. In those days, the Technician license required, in addition to passing a written test equivalent to the General Class exam, passing a 5 word per minute code test. One evening, one of our guys heard her on the repeater, and asked her how well she could copy code. “Oh,” she said, “My husband never taught me the *code!*” The subject was never mentioned again.

“Ho-Ho-Kus Flash,” or simply “Flash” for short, was the sole member of our “Good Grammar Committee.” As on-air policeman, he stood watch on the frequency to insure proper operating procedures. This meant giving preference to senior members of the group, keeping longwinded ragchewers at bay, and disciplining or banishing violators as punishment for their infractions. “Flash” was a big man — about the size of a refrigerator with feet. How he got the nickname “Flash” I’ll never know. People learned to obey him, though, out of fear that at the next repeater club meeting “Flash” would simply stomp on them, and squash them like a bug.

“Ditto” was one of our quieter members. He came to meetings in simple, well-worn clothes, looking more like the guy who comes to fix your washing machine. But appearances can be deceiving, and they certainly were in the case of “Ditto.” He was mayor of Upper Saddle River at the time, a successful businessman and multi-millionaire, who often referred to his company as the “skunk works.” He once quipped, “I gave up working on my first million, years ago. I decided to work on my second million, instead.” Another time, he quoted Tolouse-Lautrec on the subject of marriage: “It’s like a long, boring dinner, with dessert at the beginning.” He was just a down-to-earth, humble guy with no pretensions, and everybody liked him.

One of our guys was a long-time VHFer with a recent interest in FM repeaters. I’ll call him “Elvis.” He worked for a Japanese manufacturer of consumer electronic products that was once in Saddle Brook. Over the years, “Elvis” had built a lot of VHF equipment and he had done a nice job of resurrecting an old Motorola mobile rig, transforming it into a 15 watt base station, with meters to monitor transmit deviation and limiter current on receive. The only trouble was that “Elvis” had re-painted the cabinet with a thick coating of oil-based paint, and when the rig got hot after being on awhile, the smell was pretty intense.

## The Way We Were

I call him “Elvis” because he was a 1950s guy living in the 1970s. He looked like he’d just stepped off the set of a James Dean movie — D.A. haircut, “pegger” pants and pointy shoes which he called “fence climbers.” His broadcast radio was permanently locked onto the New York “oldies” station. Above his 2 meter rig was a large, color photo of Elvis Presley and, I am told, under his bed was a pair of blue suede shoes. Hippies, he was convinced, had ruined everything.

He had a unique vocabulary. To acknowledge someone’s transmission, he’d say, “Gotcha covered, cuz.” To remark on how well his new rig was performing, he’d say, “It’s workin’ out like a raped ape.” For something really remarkable, he’d exclaim, “Hotchy totchy, mooshy moosh!” which I later found out was fractured off-color Japanese slang. He liked cheap beer and stag movies. In later years, he moved to the Deep South, and went full redneck.

I’ve described the more interesting characters on the seven-nine repeater from back when, but I’ve left someone out — myself. I was given the nickname “Little Acid Mouth.” I was about ten years younger than my almost-namesake at the time, but similar in repartee. I could hold my own in verbal jousts, even with “Mister Acid Mouth” himself. I did not suffer fools gladly then, but I have mellowed considerably since.

I once heard myself described by a guy on the Mount Beacon repeater as “wearing corduroy jeans, engineer’s boots, smoking smelly little Italian cigars, and being in need of a haircut.” At least, it was acknowledged that I bathed, albeit infrequently.

My home station I have already described in part, but in addition to the Aerotron, which I kept upstairs in my room, I inherited the remains of the original “seven-six” repeater, later re-configured for .19-.79, which consisted of separate transmitter and receiver strips with power supply, all made by Federal, and installed in a half-size 19 inch rack. (Federal Electric, later owned by IT&T, once had a plant in Paramus, and was one of our local sources of FM equipment). These were kept in my basement-workshop-stockroom area, and like the Aerotron upstairs, kept on day and night, which was typical in commercial 2-way radio installations. A coaxial switch allowed use of one rig or the other on the same antenna, depending upon where I was in the house.

My 10 meter FM rig was a G.E. Pre-Prog running 30 watts out to a coaxial “sleeve” antenna, with G.E. control head and DuMont speaker (yes, DuMont also made FM equipment at one time). Now and then, I’d hear a certain W5 station break the squelch, a RACES station running their daily test from Bexar County, Texas. Other than a handful of stations, mostly far away, there was little else on 29.6 FM.

My 2 meter mobile at the time was a G.E. Progress Line, single-frequency, 30 watt rig, parked on 146.79 repeat. The mobile antenna was a Larsen “Kulrod,” a 5/8 wave mag-mount on the roof of my ’71 Firebird, whose engine was a muscular “350.” Damn! That car could GO. Now, I drive a Prius.

I was one of the first stations on the repeater, even before it had moved to seven-nine, and one of its control operators. Its first call was K2GJY when in Ridgewood and later WA2UWR (Ugly Water Rat), and then moved to Paramus. The call W2AKR was assigned later, as a memorial to one of our members, who had been Bergen County RACES Coordinator.

I was editor of the club newsletter, in which I reported general club news and events, lists of new members (and freeloaders who used the repeater without paying), short technical articles, and a lot of humor. But there was also an “underground” club newsletter called “Desense,” started by a friend of mine.

## The Way We Were

I had not sent out the official club newsletter in a couple of months, having nothing newsworthy to report. Perhaps it was just to “needle” me, but one issue of the underground newsletter complained about that, suggesting that I had absconded with the newsletter funds. Nonplussed by this attack, I replied in the next newsletter edition as follows:

*“Yes, it’s true. I took all the money in the newsletter account and attempted to flee to Mexico. But as there were only two dollars left in the account, I could only drive as far as Morristown before I needed gas, so I bought the gas, turned around and came home. I’m truly sorry for this moral lapse, but the temptation for easy money was just too great for me to resist. I promise to return the two dollars to the newsletter account as soon as I get paid this Friday. But it will have to be in pennies.”*

Today, we are the best of friends. (I think).

73,

Fred W2AAB

END OF PART 2

*NEXT MONTH: “Apocalypse Too Soon”*

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## Congratulations!

Pete (KD2BMX) reports the results of the July 13, 2019 FLARC VEC Amateur Radio Exam Sessions:

Total Number of Candidates served: 1

| Name        | Call  | License Earned |
|-------------|-------|----------------|
| Gary Pedote | N2VKZ | General        |
|             |       |                |



## Van Fest Special Guests!!

After being found and not harmed, the foxes decided to join in VanFest sampling the vegetarian entrees.



The foxes

## RACES/ARES Corner (Continued)

Our monthly meetings usually take place right after the FLARC business meeting. Please join us for the next FL-RACES meeting.

If you are interested in joining the Fair Lawn RACES, please contact me. You don't have to be a Fair Lawn resident to be a part of Fair Lawn RACES.

For information regarding Bergen County RACES, please go to <http://www.bcnjraces.org>.

Thank you very much. 73.

David KD2MOB

## Vintage Gear Night Highlights August FLARC Program At The Senior Center

Building on last year's high interest and by popular demand, this year's Vintage Night program focuses on gear from the 1960s both on HF and, for the first time, VHF.

**This year's program will be at The Fair Lawn Senior Center, 11-05 Gardiner Road at 7PM.  
Refreshments will be served.**

The group will look to discuss the operation of the equipment but will also make the equipment active on the air. Last year's resurrection of the original FLARC station equipment resulted in two QSO's on AM and we will similarly look to work ops who have a similar interest in vintage gear.

Our MC for the night will be Jim Joyce K2ZO who will explain, narrate and coordinate the program.

Our hard working VN Committee consists of WO2W, WI2W, W2NZ, W2JC, KO2OK, KA2YRA, KD2KLN, WA2BYX, W2KBF, KM2C, and W2AAB.

## Zeus Gets PO'ed and FLARC Is The Casualty

A lightning strike on Monday July 22nd put our repeater off the air near the start of the *Near And Far Net* and resulted in the disintegration of our newly beloved 18-foot vertical antenna. Fortunately no other damage was reported.

Karl W2KBF reported the following:

*"The W2NPT repeater antenna was badly damaged by lightning last night. Fortunately, the repeater itself seems to be OK. Following instructions from Paul W2IP, I connected the repeater to the club's X300A vertical antenna on the roof, so we are back on the air.*

*I tested the OCFD on 40 meters (using the IC746 PRO II at position 2) and the SWR looks good;*

*I tested the OptiBeam on 20 meters (using the FLEX 6400M at position 3) and the SWR looks good;*

*I tested the Motorola CDM 1550LS at position 3 (needed for FL-RACES Nets) and made a voice QSO over the NJ2BC Repeater. "*



Brad KM2C with the remains of the W2NPT VHF repeater antenna. Tnx Bennett KO2OK for the pix.



## August 2019 Meeting Notes

The members rose and recited the Pledge of Allegiance. Secretary Randy WU2S called the roll of officers and trustees and all were present except President Brad KM2C and Trustee Don N2PRT. The meeting had a quorum to conduct club business. Trustee Don N2PRT arrived later in the meeting at 7:58 pm.

Vice President Van W2DLT asked if there were any visitors or new members present. Visitor Jose KC2ETR introduced himself to the members present. Vice President Van W2DLT asked the members present to say their names and callsigns so that all would know who was present. Secretary Randy WU2S announced that the minutes from the July meeting were sent to all members of record and published in the club's newsletter, The Resonator, which is on the club's website at <http://newsletters.FairLawnARC.org>. He asked the members present if there were any corrections or amendments needed. There were none so Skip KD2BRV moved to accept the minutes as published and Dave N2AAM seconded the motion. The motion passed by acclamation.

Treasurer Al WA2OWL read this month's Treasurer's Report. He announced that we received a very generous donation of \$1,000 from a member. Al said that he is not identifying the member now because he does not yet have permission to do so. Al noted that the FLARC Council agreed to give this person a lifetime membership in recognition of his generosity. Judith KC2LTM moved to accept the report as presented and Nomar NP4H seconded the motion. The motion passed by acclamation. Secretary Randy WU2S reported for the Tech Committee that the club's repeater antenna took a lightning strike during the recent storm and was destroyed. Vice President Van W2DLT showed several pieces of the ruined antenna.

Randy said that we have a temporary antenna in place and the repeater is operating normally. We were lucky that no other equipment was affected. The Community Center did lose power and the emergency generator did not supply power as expected. The Recreation Department is investigating the failure. Fortunately for all, the lightning protection system provided a measure of safety for FLARC and for the Center's other systems. Randy noted that he and Jim W2JC are working to fix the computer control of the Icom 746Pro at operating position #2. At the moment, the radio operates normally but we are unable to use FT8, which is the primary mode of operation at this position.

## August 2019 Meeting Notes

Steve WA2BYX commented that the radio at position #5 is not properly configured to use the new Bergen County RACES NJ2BC repeater. Karl W2KBF noted that he had no problems in contacting BC RACES during the last monthly net. After the meeting, Karl solved the apparent problem by determining that the Motorola radio at operating position #3 is correctly configured to contact NJ2BC and the Icom radio at operating position #5 has the correct frequencies for NJ2BC but is not programmed with the correct PL tone. Randy will ask Paul W2IP to configure the Icom radio at position #5 to access NJ2BC when he has the time.

Jim W2JC reported on website and social media. Jim reminded all members that we have an active twitter feed which can be seen at the upper left of our website. Jim asks all members who operate FLARC radios to log all contacts in the logbook at each operating position. He noted that we have 77 confirmed contacts in our quest to merit the DXCC award (DX Century Club) with 100 confirmed contacts by the year's end. Jim reminded members that we have an active notification service via the [FairLawnARC.groups.io](http://FairLawnARC.groups.io) website. He asked all members to register. You can control how often you receive FLARC updates, view the club's calendar and find the current membership roster on this website. Posting here is a convenient way to update FLARC members.

Fred W2AAB asked about funding for obtaining rare DX QSL cards. Jim W2JC, our QSL Manager responded that we have ample funding and a process to get the cards we need. Jim reiterated that all members need to log all our contacts so that stations seeking our QSL cards will be easily confirmed. Vice President Van W2DLT announced that we have 63 video presentation segments on the FLARC YouTube channel thanks to the huge effort by Thom W2NZ. Fred W2AAB and George W3EH reported that they are still running the Thursday evening CW classes, but attendance has dropped off during the summer. Some members have come in on Thursday to operate the stations.

David KD2MOB reported that Steve WA2BYX and Thom W2NZ operated as KB2FLR during a past Wednesday evening as the scheduled net control station for the monthly Bergen County RACES voice net. David said the Fair Lawn ARES group continues to run a weekly voice net on Wednesday evenings at 7:00 pm on the W2NPT repeater.

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On the third Wednesday of the month. FL ARES holds a video conference training session at 7:00 pm for any radio amateur interested in emergency communications, not just ARES members. You may login to the session on Zoom at <https://zoom.us/j/520990723>

Ed WX2R reported for the Publicity Committee. He thanked all the people from FLARC and the TCRA who participated in the Ham Radio for Kids Day in Elizabeth, NJ on the past Saturday. Ed WX2R announced that the guest speaker schedule includes:

--August 16 – Vintage Night at the Fair Lawn Senior Center. Members will discuss and demonstrate classic rigs from the past.

--September 20 – Tim Duffy K3LR will talk to us about his “superstation” in Pennsylvania. Tim is a well-known radiosport contest, the founder and chairman of Contest University (CTU) and the Chief Operating Officer of DX Engineering which sells a wide range of amateur radio equipment and accessories.

--October 16 – Dr. Howard Michel, WB2ITX, the ARRL CEO will speak about the state of amateur radio in his first address to a New Jersey club.

--November 15 – George Sabbi KC2GLG will tell us about SKYWARN, the amateur radio weather observation and reporting service.

--December 20 – Ria Jairam N2RJ, ARRL Hudson Division Director.

--January 17, 2020 – Florencia Pierri KD2PHZ, who is the Sarnoff Collection Curator at The College of New Jersey (TCNJ) will speak to us about the early days of radio.

--February 21, 2020 – Ed WX2R will present the results of the annual FLARC membership survey.

Fred W2AAB announced that Vintage Night will focus on gear from the 1960s. Gene WO2W repaired a Heathkit Twoer to operate at this event.

Vice President Van W2DLT noted that Brian KD2KLN is our Quartermaster and that members have access to a large variety of test equipment tools and parts as a benefit of their membership. See Brian to check out any gear that you would like to borrow.

Secretary Randy WU2S announced that we just received a donation of a T-handle nut driver set from Steve WA2BYX. The members present applauded Steve’s generosity. Vice President Van W2DLT reminds members that FLARC branded apparel is available from Ham Threads. FLARC members often make a great impression on visitors when wearing the FLARC shirts and caps at public events. Visit <https://www.hamthreads.com/> or <http://bit.ly/FLARC-Apparel>

## August 2019 Meeting Notes

Vice President Van W2DLT asked if there was any other old business and there was none.

Vice President Van W2DLT announced that regarding new business there are several contest events forthcoming. The North American QSO Party (NAQP) Single-Sideband (SSB) contest will be on Saturday August 17. Any members who are interested in operating the FLARC stations for this contest should contact Van. Details of the event can be found at <http://www.ncjweb.com/NAQP-Rules.pdf> Jim W2JC said that the New Jersey QSO Party will be held on Saturday September 21 as a one-day event. We plan to operate W2NPT again during this contest.

Brian KD2KLN announced that the Monday night net is running well and needs volunteers to act as the net control station for all the sessions in August. Please contact Brian to volunteer. [techrat@obsolyte.com]

Vice President Van W2DLT said that anyone can check into the net via Echolink too.

Having no further business, Vice President Van W2DLT asked for a motion to adjourn. Gene WO2W so moved and Al WA2OWL seconded the motion. The members present voted in favor and the meeting was adjourned at 8:25 p.m.

Respectfully submitted,  
Randy WU2S, Secretary

## Remember Your ARRL Membership

FLARC is an ARRL Special Service Club and that brings tangible benefits to us. We have a large percentage of club members who are also ARRL members and our SSC designation depends on it.

If you are not a member of ARRL please consider it. We have applications in the office and you can always enroll on line at ARRL.org.

FLARC is fortunate that a number of its members also hold ARRL positions -- including Ria N2RJ, our Hudson Division Director.

## **Results of Ham Radio for Kids Day 27 July 2019 in Elizabeth, NJ**

The day was well suited for outdoor operating in a publicly visible venue in downtown Elizabeth, NJ on Saturday, July 27, 2019.

FLARC members who participated in setting up, operating, interacting with the public and disassembling the stations include Ed WX2R, Karl W2KBF, Larry WA2ALY, Dave N2AAM, Van W2DLT, Jim W2JC, Nomar NP4H, Brian KD2KLN, John W2JLH and Randy WU2S. We were visited by FLARC members Ria N2RJ, Aly ALØY and Noel W2MSA.

The Tri-County Repeater Association turned out in force with their trailer full of radio gear and a team to setup and operate an FT8 and a VHF station.

We learned some important lessons from this event. Perhaps the most important finding was that FLARC could setup an HF and a VHF station in two hours at a completely unfamiliar site and operate them successfully. This event was a great test of our ability to operate in simulated emergency conditions.

Another thing we learned is that Randy has a strong tendency to pack far more gear than we need. With another hour's setup time we could have operated a 4A class Field Day operation running on two separate generators, all with battery backups!

While we did not see the large crowd of families that we expected, we did see a steady flow of people. All of them spent a lot of time at each of the operating positions. No one was rushed to move on to something else, so all of us could take the time to have meaningful conversations.

The Morse code booth run by Larry WA2ALY was a highlight for many children and their parents. John W2JLH offered a safe look at the sun through his solar telescope. Try as we might, none of us could find any sunspots. John explained what sunspots are, and the importance of sunspots to worldwide HF communications.

Thanks to all who helped make this event a success through the joint efforts of FLARC and the TCRA.



## Member Profile (Continued)

### What should be the club's priorities in the next year?

Keep a steady pace. We are at the top of our membership and about to explode again.

The monthly guest speakers (and of course the cookies) need to be ongoing. Even if one of the FLARC members has a 30 minutes educational class – it's activity that brings in the people.

Thursday nights have relieved pressure from Friday night and gives guests and members a chance to visit our facility and learn what FLARC can really do.

### What else can you tell the club about yourself and/or ham radio?

As we all know, there are now different types of communications that have evolved from Marconi's time. It's fun to look back and learn "how did they do that with very little equipment or parts on hand". I guess back then the inventors were their own "Elmers". I feel looking back in time to be a good start so today's world will be appreciated by all.

### What other ham related clubs or organizations do you belong to?

The Fair Lawn Amateur Radio Club has been more than enough to handle. Since I have been the Secretary for three years, Vice President for two years, President for one year (that certainly was an experience), now Membership Chairperson and all the rest of the years a "regular member" but very active within the club.



Judith KC2LTM

## Theoretics Demystified (Continued)

But now add to this Echolink and remote radio operation, and there you have part of our modern communications network along with fiber optics to the home for your PCs and smart TVs.

In the beginning I alluded to dangers if depending on too little for too much. I mean the internet and cell systems are not infallible, are hack-able and overloaded. The system sheds emails or delivers them later or not at all, the system may drop out entirely causing you to reset your router and switches (this also happens during routine service to the system); things fail, power glitches, and other things occur ( including overseas hacking) that can disrupt service. The problem is that we expect flawless service, we depend on it too much.

A big problem is social media which is a big money maker for the owners but adds very little quality to life -- in fact degrades it. A recent study using MRI and CT has shown that those who use social media extensively, have up to twenty percent less brain function in these area of the brain that control reasoning. There are now centers open to help with the addiction to social media! We as hams are better off as we concentrate our usage of technology for learning and the good of others. There is more to come with the advances in radio technology, but maybe we need to get back to analog basics for when technology fails.

Lastly when using your devices, try to shift the color tone of the screen you are looking at away from the blue end of the spectrum later in the evening, as it has been found that blue light is not good for the eyes and can cause difficulty in getting to sleep. This is why lighting using 2700k output is preferred for residential lighting. It is closer to the natural spectrum of light that we evolved in. This is why the drivers with the blue headlights do not see as much as those with halogen lights or the newer color corrected headlights.

Eye sensitivity is best in the green/yellow/orange and red areas and poorer in the blue spectrum area of visible light. The reason I mentioned all of this is that we all are glued to some screen or other in our daily lives. Technology and ham radio is great and we would not go back to the 50s (except for nostalgia reasons). So enjoy the tech but don't forget to look out the windows at the scenery.

73, W2ABE.